CASE STUDY – CAD 208 WEEK 9

ROGERS TOY COMPANY

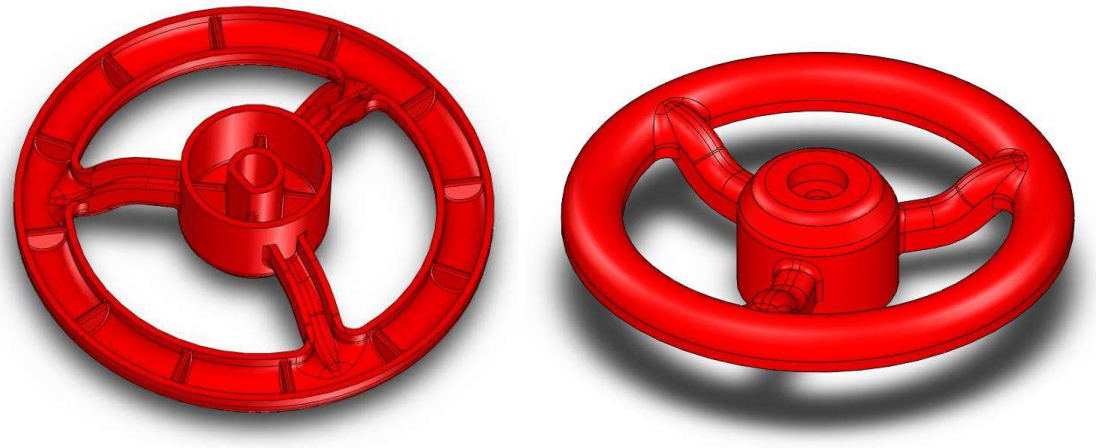
PROJECT: TOY STEERING WHEEL

Rogers Toy Company has hired us to analyze their latest design for a child's "runabout" toy vehicle. We quoted this job at $3500.

Your task is to identify possible regions of failure. Analyze the design and if need be enhance the design to prevent the steering wheel from breaking in the event a child applies more than 30 lbs of torque . Also, if possible optimize the design to reduce material and manufacturing costs. Write a minimum two page report on your findings with visuals.

Provide the following:

- MASS PROPERTIES before and after (weight in lbs.)
- PLOTS
    - F.O.S. (2)
    - STRESS
    - DISPLACEMENT (w/probe details)



MATERIAL: ACRYLIC (Medical Grade Cast Acrylic)